

you could read me flower ^{or bud} "dried without
crushing them - At any rate I should be
sorry to put the plant into *Orchis* from
which it differs so widely in other respects
whilst it resembles so closely the *H. obtusata*
with which you have associated it in your
Manual - differing chiefly in the colour
of the flower and as regards the anther
cells much as *H. bipolia* differs from
H. chlorantha - both of them are
nearly allied to the *H. spatulata* from
the Himalayas which Reichenbach for
reasons similar to yours (upon ^{to}
which I cannot agree) puts into *Orchis*

I think that *Dianatea* with its enormous
helmet shaped rostellum must be retained but
for a Cape species only *D. speciosa* & *D. foliosa*.
The stigmatal processes are of no use generically
they differ so very much in species & there are
very closely allied and though existing perhaps
in each species pass so gradually from one
to another that I for one can make no
use of them for generic distinctions

Yours very sincerely
George Bentham

25, WILTON PLACE.
London S.W.
June 19/60

My dear Gray

Very glad to hear of your
having taken the decided step of engaging
a berth for England in September I hope
I may retain till then my present health
I doubt however if I shall even then
have got over my Orcheidaceous troubles,
I now write to ask upon what ground you
put *Tabernaia rotundifolia* into *Orchis*
It is very difficult to ascertain from dried
specimens the precise form of the top of the
column in the smaller flowered *Orchideum*
but on a careful examination of a bud and
of an open flower of *H. rotundifolia* I can
find no trace of the deep prominently raised
notch into which the caudicle gland
of *Orchis* are immersed nor is it represented
in Burmeister's original analysis very

imperfectly copied in the *Hima borealis* Amer.
cana I have been for two or three weeks
working at Habearia and tried much to
separate the principal genera which have
been proposed but finding the characters
upon which they have been established to
vary so much from species to species
that I have been obliged to revert to the
views of your manual and reuniting the
whole into one genus of which we have in
the New Herbarium about 340 species
including *Gymnadenia* *Nepetella* *Imia* *Biden*
Neotinea *Reichb.* *Leucorchis* *E. Kelly* or *Rechia*
Pastat. *Perularia* *Liudt.* *Derocmeria* *Reichb.*
Peritylus, *Bl* or *Deuthania* *Reich* *Cologlossum*
Hartm *Coeloglossum* *Liudt.* (different from *Hartmann*)
Delabrella *Liudt.* *Centrochelus* *Schum.* *Platanthera*
Reich & *Liudt.* and *Diplosycheium* *Schum.*

In all *Ophryogea* I take the caudicle to be a
true caudicle, a portion of the pollen, but the
gland to which it attaches itself is I think as
in other *Orchideae* the produce of the back or
the upper surface of the rostellum. In all

Ophryogea the anther cells are closely adnate to the
clinandrium the real connective being so closely
consolidated with the clinandrium as not to be
distinguishable from it. In *Habearia* the
apex of the anther cell (inferior in consequence
of the reversed position of the anther) is sometimes
very short and adnate to the end ^{of the} rostellum-
lobe, very short or scarcely prominent in others
the apex are much prolonged and though
when open often quite free yet I believe
they are always in the early bud closely applied
to or almost adnate to corresponding ^{lobes} lobes
of the rostellum these lobes of the rostellum
are often channelled sometimes almost closed
over the apex of the anther cell and occasionally
slightly turned up at the end but never as far
as I can see forming the distinct single
pouch of *Orchis* & *Scapula* or the two
pouches of *Ophrys*. This slight turn up has
been the occasion of the dispute whether *Orchis*
Perularia *Hemipilia* *Glossopus* and other
single species of *Habearia* have or have
not the pouches of *Ophrys*. What I want to
know from you is whether you have examined
the rostellum in a fresh state and whether